



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0462; Project Identifier MCAI-2021-00647-T]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 737-700, 737-800, 747-400, 747-8, 767-400ER, and 777-200 airplanes. This proposed AD was prompted by a report that there is the potential for electrical current to pass through low pressure (LP) oxygen flex-hoses in the gaseous passenger oxygen system. This proposed AD would require replacing each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-conductive oxygen flex-hose. This proposed AD would also prohibit installation of a conductive oxygen flex-hose on LP gaseous passenger oxygen systems. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West

Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Lufthansa Technik AG, Weg beim Jäger 193 22335 Hamburg, Germany; telephone 49-40-5070-67428; Internet <https://www.lufthansa-technik.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0462; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0462; Project Identifier MCAI-2021-00647-T” at the beginning of your comments. The most helpful comments reference a specific portion of the

proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0135,

dated June 2, 2021 (EASA AD 2021-0135) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain The Boeing Company Model 737-700, 737-800, 747-400, 747-8, 767-400ER, and 777-200 airplanes with certain Lufthansa Technik AG supplemental type certificates (STCs). Those STCs are not validated by the FAA; this proposed AD therefore refers to the corresponding FAA STC, STC ST04127NY, instead in the applicability. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0462.

This proposed AD was prompted by a report that there is the potential for electrical current to pass through LP oxygen flex-hoses in the gaseous passenger oxygen system. Exposure to electrical faults, such as unintended short circuits, can result in localized electrical heating of the LP oxygen flex-hoses. The FAA issued AD 2018-09-12, Amendment 39-19269 (83 FR 22360, May 15, 2018) (AD 2018-09-12), for certain The Boeing Company Model 747-200B, -300, and -400 series airplanes; and AD 2019-25-12, Amendment 39-21010 (85 FR 449, dated January 6, 2020) (AD 2019-25-12), for certain The Boeing Company Model 777-200 and -300ER series airplanes. AD 2018-09-12 and AD 2019-25-12 require replacing the LP oxygen flex-hoses with new non-conductive LP oxygen flex-hoses in the gaseous passenger oxygen system in airplanes equipped with therapeutic oxygen. The same conductive oxygen flex-hoses affected by those ADs have also been installed on airplanes modified by the Lufthansa Technik AG STCs and FAA STC that are the subject of this AD but were not part of the applicability of AD 2018-09-12 and AD 2019-25-12. The FAA is proposing this AD to address the possibility of electrical current passing through the LP oxygen flex-hoses in the gaseous passenger oxygen system, which could cause the flex-hoses to melt or burn and result in an oxygen-fed fire in the passenger cabin. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

Lufthansa Technik AG has issued the following service information.

- Lufthansa Technik Design Change Summary ASN-00-DCS-01, Revision 8, dated November 5, 2020.
- Lufthansa Technik Design Change Summary ATB-25-DCS-01, Revision 10, dated January 7, 2021.
- Lufthansa Technik Design Change Summary ATR-23-DCS-01, Revision 2, dated January 21, 2021.
- Lufthansa Technik Design Change Summary BCM-35-DCS-01, dated January 4, 2021.
- Lufthansa Technik Design Change Summary BCP-35-DCS-01, Revision 1, dated April 20, 2021.
- Lufthansa Technik Design Change Summary BCQ-35-DCS-01, Revision 1, dated April 20, 2021.
- Lufthansa Technik Design Change Summary BCR-35-DCS-01, Revision 1, dated April 20, 2021.
- Lufthansa Technik Design Change Summary BCS-35-DCS-01, dated January 5, 2021.
- Lufthansa Technik Design Change Summary BCU-35-DCS-01, dated January 5, 2021.
- Lufthansa Technik Design Change Summary BCV-35-DCS-01, dated February 4, 2021.
- Lufthansa Technik Design Change Summary BCW-35-DCS-01, dated January 4, 2021.

- Lufthansa Technik Design Change Summary BCX-35-DCS-01, Revision 1, dated February 4, 2021.

This service information describes procedures for replacing each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-conductive oxygen flex-hose. These documents are distinct since they apply to different airplane models and manufacturer serial numbers.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require accomplishing the actions specified in the service information already described. This proposed AD would also prohibit installation of a conductive oxygen flex-hose on LP gaseous passenger oxygen systems.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 7 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 17 work-hours X \$85 per hour = Up to \$1,445	\$10,090	Up to \$11,535	Up to \$80,745

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

The Boeing Company: Docket No. FAA-2022-0462; Project Identifier MCAI-2021-00647-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-700, 737-800, 747-400, 747-8, 767-400ER, and 777-200 airplanes, certificated in any category, manufacturer serial numbers (MSN) 28551, 28961, 29953, 30791, 30884, 32445, 32575, 32915, 32970, 32971, 33010, 33102, 33361, 33684, 34205, 37500, and 37544, modified by FAA supplemental type certificate (STC) ST04127NY.

(d) Subject

Air Transport Association (ATA) of America Code 35, Oxygen.

(e) Unsafe Condition

This AD was prompted by a report that there is the potential for electrical current to pass through low pressure (LP) oxygen flex-hoses in the gaseous passenger oxygen system. The FAA is issuing this AD to address this condition, which could cause the flex-hoses to melt or burn and result in an oxygen-fed fire in the passenger cabin.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Replacement

Within 48 months after the effective date of this AD: Replace each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-conductive oxygen flex-hose, in accordance with the Accomplishment Instructions of the applicable Lufthansa Technik Design Change Summary (TS-145 Installation Document Number) corresponding to the affected part numbers specified in figure 1 to paragraph (g) of this AD.

Figure 1 to paragraph (g) – Service Information¹

Model–	Lufthansa Technik Design Change Summary –	Prohibited Conductive Oxygen Flex-Hose Having Part Number (P/N) –	Serviceable Non-Conductive Flex-Hose Having Part Number (P/N) –
737-700 airplanes	BCP-35-DCS-01, Revision 1, dated April 20, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
737-800 airplanes	BCQ-35-DCS-01, Revision 1, dated April 20, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57211Nxxx
	BCR-35-DCS-01, Revision 1, dated April 20, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57211Nxxx

Model–	Lufthansa Technik Design Change Summary –	Prohibited Conductive Oxygen Flex-Hose Having Part Number (P/N) –	Serviceable Non-Conductive Flex-Hose Having Part Number (P/N) –
		57211-xxx	
	BCS-35-DCS-01, dated January 5, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
		38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN

Model–	Lufthansa Technik Design Change Summary –	Prohibited Conductive Oxygen Flex-Hose Having Part Number (P/N) –	Serviceable Non-Conductive Flex-Hose Having Part Number (P/N) –
747-400 airplanes	BCX-35-DCS-01, Revision 1, dated February 4, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57297Nxxx
		57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
	BCU-35-DCS-01, dated January 5, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
		57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
		55017-xxx	
		57211-xxx	
	BCV-35-DCS-01, dated February 4, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57297Nxxx
		55017-xxx	57211Nxxx
		57211-xxx	
	BCW-35-DCS-01, dated January 4, 2021	57021-xxx	57211Nxxx
		57211-xxx	
747-8 airplanes	ASN-00-DCS-01, Revision 8, dated November 5, 2020	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57297Nxxx
	ATB-25-DCS-01, Revision 10, dated January 7, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57297Nxxx
		57021-xxx	57211Nxxx
767-400ER airplanes	ATR-23-DCS-01, Revision 2, dated January 21, 2021	60B50060-x	57297Nxxx
777-200 airplanes	BCM-35-DCS-01, dated January 4, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57297Nxxx
		57071-xxx	57211Nxxx
		57073-xxx	
¹ The “x” used in this figure can be any combination and number of numerals and letters.			

(h) Parts Installation Prohibition

As of the effective date of this AD, no person may install a prohibited conductive oxygen flex-hose specified in figure 1 to paragraph (g) of this AD, on LP gaseous passenger oxygen systems on any airplane.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information in paragraphs (i)(1) through (6) of this AD.

(1) Lufthansa Technik Design Change Summary ASN-00-DCS-01, Revision 6, dated June 25, 2020.

(2) Lufthansa Technik Design Change Summary ASN-00-DCS-01, Revision 7, dated August 26, 2020.

(3) Lufthansa Technik Design Change Summary BCP-35-DCS-01, dated January 5, 2021.

(4) Lufthansa Technik Design Change Summary BCQ-35-DCS-01, dated January 7, 2021.

(5) Lufthansa Technik Design Change Summary BCR-35-DCS-01, dated January 7, 2021.

(6) Lufthansa Technik Design Change Summary BCX-35-DCS-01, dated January 7, 2021.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If

sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or the European Union Aviation Safety Agency (EASA); or Lufthansa Technik AG's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2021-0135, dated June 2, 2021, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0462.

(2) For more information about this AD, contact Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) For service information identified in this AD, contact Lufthansa Technik AG, Weg beim Jäger 193 22335 Hamburg, Germany; telephone 49-40-5070-67428; Internet <https://www.lufthansa-technik.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call

206-231-3195.

Issued on April 11, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-08584 Filed: 4/21/2022 8:45 am; Publication Date: 4/22/2022]